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ABSTRACT

This paper briefly outlines the results of a survey of 339 teachers at the University of Strathclyde, Glasgow, the purpose of which was to evaluate the use and appropriateness of educational technology in teaching and learning. Results show that only the overhead projector is used with substantial frequency and that staff training and development in the production of overhead projector materials is required. Staff development in the use of computer assisted instruction is also needed. It is noted that lack of time to develop visual aids, poorly equipped rooms, unavailability of hardware and software, and the lack of resources and materials prevented more use of visual aids. (DB)

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A STUDY OF ATTITUDES AND PERCEPTIONS CONCERNING NEW TECHNOLOGIES

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ABSTRACT

The major aim of the survey was to evaluate the use and appropriateness of educational technology in teaching and learning within a Scottish University. The results showed that in practice only the overhead projector was used with substantial frequency. A second aim was to ascertain areas where staff training and development were required. The main areas for requested training were in the production of overhead projector material and in the expansion of knowledge of computer assisted learning. A third aim was to determine ways in which educational technology could enable teaching and learning to become more efficacious.

INTRODUCTION

The University of Strathclyde Senate had approved, as one of its more immediate aims for the period 1986-1991, the continuation of the modernisation of course content, course design and teaching methods. The University Planning Secretariat in December 1988 stressed the importance of the computer to learning as well as to research. A survey at Carnegie Mellon University in 1985 (ref. 1) established from a sample of faculty and students that the main usage of computers was job related but largely in the area of text editing.

This present survey was undertaken to evaluate the appropriateness and current use of different kinds of technological aids within the University of Strathclyde for both teaching and learning, to establish whether there was a need for staff training in these aids and to ascertain how better use could be made of the new technologies in teaching and learning.

OUTLINE OF STUDY AND METHODS

A questionnaire on the use and appropriateness of different kinds of aids (overhead projector, audio-tapes, slides, tape-slides, films/videotapes, computer assisted learning and other aids) for both teaching and learning was sent to 669 members of teaching staff. There were 339 replies. To establish whether these replies were typical of the whole population, a number of non-responders were subsequently persuaded to answer and from these, matched samples ($n_1 = n_2 = 30$) were created to compare late and early responders. There were no statistically significant differences in usage

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between the two groups (Mann-Whitney Test). As well as specific questions on the use of the listed aids there were questions on the need for staff training and open questions to gain information on staff attitudes to the technologies.

RESULTS

TABLE I indicates the current use of technological aids and the percentage of times these were used in teaching.

TABLE I USAGE OF TEACHING AIDS

Total Responses Expressed as Percentages

	50% and above	25-49%	10-24%	1-9%	Never used	No response
Overhead Projector material	53.1	13.6	13.3	13.3	3.8	2.9
Audio-tapes	0.9	2.4	4.4	15.6	65.5	11.2
Slides	8.3	8.0	13.3	33.3	28.3	8.8
Tape-slides	0	0.3	1.8	10.0	74.3	13.6
Films/ Videotapes	0.9	5.9	16.5	38.9	30.4	7.4
Computer assisted learning	1.8	4.7	8.0	14.2	60.5	10.9
Others	1.8	1.8	5.0	13.6	55.8	22.1

Source: Gordon, Hutchison and O'Hagan 1989 (ref. 2)

The total figures were separated and attributed to the four faculties, Arts and Social Studies, Business, Engineering and Science. A comparison of usage at 50% and above across the four faculties showed there was significant general concordance ($W = 0.81$ $p<0.05$ level) although there were differences in the levels of correlation between individual faculties (TABLE II).

TABLE II FACULTY CORRELATIONS

	Arts and Soc.Stud.	Business	Science	Engineering
A.SS.		0.50	0.32	0.47
Bus.	0.50		0.74	0.72
Sc.	0.32	0.74		0.87
Eng.	0.47	0.72	0.87	

(Kendall. tau ≥ 0.63 $p \leq 0.05$)

Table III shows the considered appropriateness of the aids, the percentage actually using these in teaching (approx. 10% or more of time) and in student learning (approx. 10% or more of time).

TABLE III COMPARISONS BETWEEN PERCEIVED APPROPRIATENESS AND USAGE OF AIDS

	Appropriateness	Teaching	Learning
	Very Appropriate and Appropriate	10% and over	10% and over
Overhead Projector material	94.4	80.0	27.4
Audio-tapes	18.3	7.7	5.6
Slides	67.9	29.6	7.1
Tape-slides	19.4	2.1	0.9
Films/ Videotapes	66.7	23.3	10.1
Computer assisted learning	43.7	14.5	14.2
Others	35.7	8.6	6.5

Table III shows the mismatch between what the respondents considered to be the appropriateness of the aids and the actual use of these aids. The answers to open questions indicated that the barriers which prevented more use were related to lack of time, poorly equipped rooms, the unavailability of hardware and relevant software and the lack of knowledge of resources, materials and methods.

TABLE IV PERCENTAGES CONSIDERING TRAINING AS IMPORTANT

OHP	AUDIO	SLIDES	T.SLIDES	F/V	CAL	OTHERS
55.8	20.6	42.8	25.7	44.9	55.8	40.8

Table IV indicates a positive demand for staff development and an implicit commitment to change.

REFERENCES

1. P. Anderson, Faculty and Student Observations of Their Computing Behavior (in Computing and Change on Campus, eds. S. Kiesler and L. Sproull, Cambridge Univ. Press, New York, 1987).

1. G. Gordon, G. Hutchison, F. O'Hagan, Technological Aids in Teaching and Learning, (University of Strathclyde, Glasgow, 1989).